initiating a plasma in the chamber; and

reacting the alkylsilane in the presence of the plasma to form silicon carbide;

depositing a first dielectric layer on the silicon carbide layer;

depositing a silicon carbide etch stop having an etch selectivity ratio of at least about 40 to 1 on the first dielectric layer by a method comprising:

introducing an alkylsilane and a noble gas into a chamber;

initiating a plasma in the chamber; and

reacting the alkylsilane in the presence of the plasma to form silicon carbide;

patterning the silicon carbide etch stop;

depositing a second dielectric layer on the silicon carbide etch stop;

etching the first dielectric layer and the second dielectric layer to form a feature definition;

depositing a tantalum nitride barrier layer in the feature definition;

depositing a copper layer over the tantalum nitride barrier layer to fill the feature definition; and

depositing a silicon carbide passivation layer on the copper layer.

16. The method of claim 15, wherein the alkylsilane is trimethylsilane.

17. The method of claim 15, wherein the silicon carbide barrier layer is deposited at a temperature of between about 300°C to about 400°C.

18. The method of claim 15, wherein the silicon carbide barrier layer is deposited at a chamber pressure between about 6 to about 8 Torr.

19. The method of claim 15, wherein the silicon carbide passivation layer is deposited by the method for depositing the silicon carbide barrier layer.